

Investigation of Spontaneous Tobacco Cessation

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Tobacco use is the number one public health concern in the United States (Lichtenstein & Glasgow, 1992). Smoking cigarettes is a risk factor for heart disease and cancer and is known to account for approximately 400,000 premature deaths each year and is also the major preventable risk in the United States (U.S. Department of Health and Human Services, 1986; 1990). The fact that over 15 million Americans quit smoking since 1982 is offset by the sobering fact that 4 million Americans died in that same time period from smoking-related disease. In an effort to improve public health, the recommendation from both the U.S. government and the medical community is that all individuals cease to use tobacco products. This campaign has been largely successful in disseminating information concerning the dangers of tobacco (Cohen et al., 1989).

A wealth of research has been conducted which attempts to better understand the intricacies of tobacco addiction. The majority of research has been upon assessments of the relative efficacy of various treatment methods. The findings demonstrate little difference between treatment types with low success rates and high numbers of relapse incidents for most approaches (Prochaska, DiClemente, Velicer, Ginpil, & Norcross, 1985). One investigation found that of those who participated in any type of formal treatment, 75 to 80% had relapsed and were smoking within one year of completing treatment (Hunt & Matarazzo, 1974).

There is need to determine the reasons for the low success rates of treatment programs. Similarly, the many factors that contribute to successful cessation should be studied to completely understand the complex process of cessation. One method of learning more about the details of the cessation process is to investigate those people who were able to quit smoking without the benefit of formal treatment (Prochaska, DiClemente, Velicer, Ginpil, & Norcross, 1985). Any insight provided by these people could help to illuminate characteristics, which might aid those experiencing difficulty in their cessation attempts. There is evidence to suggest that this population is significantly larger than is the group of users who seek treatment (Hughes, 1992; Peele, 1989; Premack, 1970; Schachter, 1982).

The literature has identified several important factors, which contribute to the elucidation of the phenomenon of natural recovery but have failed to concretely define those individuals who were able to quit without treatment. There has been several factors identified, as exemplified by the presence of stages and the importance of the environment,

yet the fundamental question remains: Why are some people able to quit smoking without treatment while others can not? (Lichtenstein & Glasgow, 1992; Klingemann, 1992; Mariezcurrena, 1996). This qualitative project attempted gain some insight into both the process of spontaneous recovery and the methods utilized by successful self-quitters. The current incomplete understanding of the phenomenon contributed to this choice of methodology. The gaps in the literature suggest the need for further exploratory research, which is appropriate for qualitative designs.

Methodology

The method of data collection and analysis in this study was the Developmental Research Model (DRS). This model, as proposed by James Spradley (1979), relies on the linguistic connection of people's experiences to the words assigned to those experiences. This model was chosen for two important reasons. The use of a codified and tested model will allow others to reliably follow the process of data collection and analysis. The second rationale for this methodology choice was to help establish validity. The use of DRS allows for constant and continuous verification of the data with the subjects of the study. This ensures that clear understanding of the subject's experiences are communicated to the researcher.

Sample

The sample was collected using an opportunistic strategy. The initial criteria for inclusion in the study were tobacco-free for 5 years without the aid of any self-help or formal treatment programs. The sample consisted of 40 individuals, 21 females and 19 males with a mean of 7 years free from smoking. There were 2 African-Americans, (1 male and 1 female); and 38 Caucasians, (18 male and 20 females). There were 5 married couples in the sample.

The sample age range was from 30 through 80 (mean = 55.55 years). The subjects had smoked from a period of 5 to 50 years (mean = 24.59 years) and reported a habit ranging from 1 pack a day to 4 packs daily (mean = 1.85 packs daily). The sample appeared to be representative of the entire socio-economic strata.

Types of Questions

Each member of the sample was interviewed at least twice, and as many as four times over a period of four months. This study used three types of questions prescribed by the DRS model: 1) descriptive questions, 2) structural questions, and 3) contrast questions. These different types of questions are prescribed by Spradley (1979) to bring general themes to light and then clarify those themes. The descriptive, open-ended questions sought to gather information about general areas and aspects of the phenomenon of quitting without treatment. The second category of question attempted to

sample the language utilized by the informants. The third type of question consisted of contrast questions that attempted to clarify information gathered from the previous open-ended questions. Questions for the first round were guided by the spontaneous recovery literature.

Data Analysis

Each interview was analyzed for emergent themes through the use of domain analysis as directed by the DRS model (Spradley, 1979, p. 75). The purpose of domain analysis is to discover relationships among the words of the informants. The results were then compared to those obtained in other interviews from the same round. Overall themes were then used to construct categories.

Categories were developed and clarified simultaneously throughout the study by asking a combination of structured and contrast questions. Through the domain analysis five core categories emerged. These categories were: 1) *Contemplation*, 2) *Decision*, 3) *Relapse*, 4) *Environment* and, 5) *Process of Cessation*.

Contemplation

General statements made by informants that described contemplating quitting before the last, successful attempt was made defined this category, termed contemplation. The significant majority of informants ($n = 32$) mentioned the use of a contemplative period as integral in their attempt. Within this category three themes emerged from the data: 1) *Allows for goal setting*, 2) *Mental preparation* and, 3) *Knowledge of addiction*. The second round question, "What were your expectations when you quit?" began to produce data that showed that most of the informants put considerable thought into the decision to quit. It also began to show that this step was crucial in the attempt as it allowed for the informants to set attainable goals in their cessation attempt.

Informant 5: Because I would always sit down and think, 'OK, I'm going to quit and stop smoking.' And I would give myself a time limit and I won't just walk in and just say, 'I'm going to quit smoking,' and put them down. I would tell myself, 'I'm going to quit smoking,' and this is what I would start with on this process. So, I got myself mentally prepared. Then, when the time came, I would just put them down.

The second theme that developed in this category was that contemplation allowed the informants to focus their energy in preparation for quitting smoking. Informants used terms such as "willpower," "determination," "stubbornness," "decision" and "belief in myself." Though the informants used different terms, it was clear that the majority ($n = 31$) used the time before the cessation attempt to mentally prepare themselves. Several informants ($n = 12$) claimed that this was the most important factor in their success.

Informant 1: What I did was, I'm born in September, so around my birthday I said, 'You're going to quit and you're going to do it as a New Year's resolution.' So, it was just a period from my birthday to that New Year's Eve, I just kind of thought about, 'You're going to quit.' And that kind of built me up for the challenge.

The last theme within this category was termed *knowledge of addiction*. This theme developed as informants began to discuss their relationship with nicotine. The informants used the realization that they were addicted to motivate them to quit. One informant had admitted to being an alcoholic and had followed the Alcoholics Anonymous 12-Step Program in her attempt to quit smoking. While many other informants ($n=28$) admitted they were addicted none used the A.A. terminology with such clarity and purpose. As with the previous theme the informants used many terms to describe their use of nicotine. It was interesting to note that it was important to some informants that they emphasize that they did not have an addiction but a "habit." The informants ($n=24$) reported that they denied any addiction in previous attempts to stop smoking.

Informant 6: I thought about it, I knew that it was hazardous to my health and I had also thought that it wasn't something I liked to do anymore. It was kind of a habit that was a nasty habit. From that standpoint is how I thought of it. As a habit, as opposed to an addiction.

Decision to Quit

This category emerged mostly from the attempt to determine if this decision process was unique. This category proved amorphous at times with informants struggling to develop concrete statements about their decision. Domain analysis requires the researcher to place boundaries around the emerging themes to concretely separate it from any other theme. This proved a difficult task with this category. The themes were 1) *Unique decision*, 2) *Allows for no excuses*, 3) *Willpower* and, 4) *No desire to smoke*.

The majority of the informants had difficulty with questions requiring comparisons of the decision to quit with other life decisions. It became clear that they found this to be a *unique decision*. The use of analogous language also was not always helpful in describing their decision. They seemed to feel strongly that this was a special type of decision but were often not able to communicate the nature of the decision.

Informant 5: It was the hardest thing I ever did.

Informant 13: I can't think of something. We haven't had too many decisions like that to make. So, I don't think there's something else I can compare it to.

One of the factors that did seem to differentiate this decision was that it was a firm decision. This theme described the decision as the firmest commitment that they had ever made. One informant claimed it was a stronger decision to quit smoking than to get

married. Many of the informants ($n=24$) stated that the last successful decision to quit originated with a decision with "no excuses" for failure. The attitude during this attempt was one of complete determination.

Informant 16: For me it was quite an experience. It was ...I cannot fail at this...I must succeed at this. I was very, very determined and...when I set my mind at something, I really follow through.

The next theme that emerged was termed *willpower*. The decision to quit was associated with willpower by a significant number of informants ($n=29$). The element of willpower was described by various terminologies, with little agreement on definition. This was problematic, as no informant was able to successfully communicate the exact nature of willpower. The emergence of this theme was not a total surprise, but its connection with the decision part of the quitting process was not expected.

Informant 12: The decision was from willpower...I've got to do this.

Informant 13: I think I was just so determined, the smoking so horrified me that I was just determined. I refused to allow myself to smoke. I just think that after I decided nothing was going to stop me, it was stubborn will.

The last theme emerging from this category was the fact that very few of the informants felt any desire to smoke during the cessation process. Though many had been challenged by physical cravings in the process of quitting, the vast majority of informants ($n=37$) claimed to feel no desire to smoke. This desire to smoke was differentiated from cravings. All informants discussed physical cravings and most ($n=32$) stated that these were gone in a relatively short period of time.

There were informants who claim that the minute they made the decision to quit they no longer felt the desire to smoke. Nearly all informants currently claim to have no current desire to smoke and could not think of a situation in which they would smoke. The informants directly connected their lack of desire with the firm decision they made to quit smoking.

Informant 16: I'll never pick up a cigarette again, now, ever. I don't really have a desire to smoke. As soon as I decided to quit I never wanted to smoke again.

Relapse

This category emerged in the first round as the informants began to describe their smoking history. It became apparent from the data that *relapse* was important in the process of cessation. All but three informants had attempted to quit at least one time before this last, apparently successful attempt. The themes that emerged were 1) *Creates*

knowledge of pitfalls, 2) Less commitment in previous attempt, 3) Life events cannot overwhelm willpower and 4) No moderation.

The first emerging theme was called *creates knowledge of pitfalls*. This was appropriate, as the informants, through previous attempts, were able to determine which places or situations might be problematic in the upcoming cessation attempt.

Informant 12: I knew that there were certain things... I knew that... from previous attempts to quit smoking... that there were certain things that... smoking is a habit... like I said. You drink a cup of coffee, you smoke a cigarette. You eat, after you eat, you have a cigarette. You have a drink, you have a cigarette. So I had prepared myself that these are going to be the times that I'm going to want a cigarette. And these are going to be the times that I'm not going to let it get to me.

The category of relapse also contains other important themes. One of these was a differentiation between the last, successful attempt, and those times when the informants did relapse. This theme was composed of statements by the informants that described the difference in commitment between the attempts.

Informant 4: I was thinking too that before I actually quit, that the times before, subconsciously, I really didn't want to, or I wasn't taking the task seriously enough.

The informants mentioned many events or situations that triggered relapse. They either experienced stress of some sort or found themselves in an environment that was not conducive to their attempt to abstain from smoking. Most informants ($n=34$) claimed that when they found themselves in such a situation they relapsed. It was determined that if a cessation attempt is to be successful, events cannot overwhelm, or surprise, the individual trying to quit.

Informant 31: Well, when I was under stress and I was out and smelled that smoke the first thing I did was light up.

In their attempts to quit many informants tried to smoke moderately and soon found that they were smoking as much as before the attempt to quit smoking. This led, in the opinion of many informants ($n=28$), to a relapse.

Informant 26: And then one time I told myself I should quit. I quit for about three months. Then I went out with my friends and I thought well, I'll just have one or two. I tried that for about two weeks, you know, just a few, and I was right back to two packs a day.

Environment

Informants describing the relationship of their environment to their attempts to quit smoking define this category. There were three themes that describe this category and they were: 1) *Contributed to smoking*, 2) *Motivation*, and 3) *Attitude towards other smokers*. The first theme describes the informants claiming the environment creates negative situations in which they were tempted to smoke. A few informants ($n=8$) claimed that their environment positively reinforced their smoking habit. This theme is differentiated from the relapse category as in this theme the informants are indicating that the environment contributes to a continuing habit, not creating a relapse.

Informant 10: Yeah. My situation was very stressful. I thought I might want to quit. But not while I was over there, in Germany. It was a very tough time because I was in transition. There were lots of pressures on me. The business was 24 hours a day.

The *motivation* theme is descriptions of informants using external motivation for their cessation attempt. In these statements the majority of the motivation for quitting, if not all, came from the environment. This was a relatively rare occurrence ($n=5$), but it was successful for these informants. There was no difference in either the number of attempts or any other aspect of the cessation process other than the origin of the motivation.

Informant 12: I got it in perspective what I needed to do. I was not going to let the whole scene drag me down. It was like a challenge. I would go into a bar and just wait for someone to offer me a cigarette and then I would just say, "No, thank you." I kind of said this is going to happen and I'm not going to let it knock me down.

The last theme in this category is the attitude of the informants towards those that either continue to smoke or who relapse. This theme was divided with 10 informants feeling that those that smoke were of no consequence to them. The majority ($n=17$), however, claimed that they are strongly against smoking.

Informant 10: Well, I can no longer tolerate being around smokers. I wouldn't kiss a girl that smoked. I hate being in a room with smoking. I finally disavowed all smoking in any area I control.

Process of Cessation

Statements from the informants that describe their process of cessation define this category. The three themes which emerged in this category were 1) *Multiple techniques*, 2) *Point of no return* and, 3) *Dreams*. The first theme was fairly widespread throughout

the sample. The informants ($n=35$) indicated that they had utilized *multiple techniques* to quit. There were examples of positive reinforcement, substitution, and aversive techniques. The greatest number of informants ($n=21$) used substitution followed by positive reinforcement ($n=18$). The changing of environment was the next popular technique ($n=15$). The combination of the substitution and changing of environment techniques also proved to be the most widely used combination ($n=15$).

Informant 19: Well, I took a week off work to start. I knew it was going to be impossible to quit there, with everyone smoking. I had lots of gum that I used. And I kept reminding myself that I had made it through another day.

The second theme emerging from this category was the *point of no return*, which described a point in the cessation process when they felt that it was not worth the sacrifice to go back to smoking. This theme was fairly significant as many informants ($n=11$) described this point in time when they felt that there was too much invested to quit both physically and emotionally. This was, generally, a motivating factor for these informants.

Informant 17: At that time I would tell myself, "You can't quit now--you only have a little bit left."

The last theme in this category was named for the frequency and intensity of the dreams of many of the informants. This was an interesting, unexpected theme as many ($n=22$) informants claimed that they had vivid dreams about smoking. These dreams usually occurred while in the process of quitting. The informants reported that they dreamed that they were smoking and often woke up with a strong feeling of disappointment because they believed they had relapsed. This was followed by a strong sense of relief when they realized it was a dream.

Informant 38: Well, it was the craziest thing. I used to dream I was smoking. I could almost taste the cigarette. And I would wake up and go around being so angry that I had started again. I would then realize that I really didn't start.

Discussion

This study emphasizes the importance of the contemplative period for these informants. Some informants have claimed that proper use of this period was a determining factor in the success of the last cessation attempt. Treatment programs might improve cessation rates by inclusion of this finding.

The data from this project demonstrate that the informants could not smoke in moderation. There is some research that suggests that chemically dependent individuals may be able to maintain moderate use of the problem substance (Bailey, 1965; Humphreys, 1995; Kendall, 1964; Peele, 1985). It would be beneficial to further

understand the dynamics of moderation upon the nicotine habit as this was not the case for the informants in the study. Further studies are needed to determine if this is unique among those addicted to tobacco. The fact that the informants feel that they are not currently addicted to tobacco but could not smoke in moderation might attest to the high addictive properties of nicotine or could indicate that the informants are not as free from the addiction as they would like to believe.

The second category, Decision, demonstrates that there is a strong association between willpower and the decision to quit. It is difficult to connect a successful cessation attempt with the use of willpower without creating a tautology: One is successful if one has willpower, one has willpower if one successfully quits. Clearly there is evidence to verify the existence of the concept but the results had identified willpower with the action stage. (Granfield, 1996; Ludwig, 1985; Mariezcurrena, 1996). The use of willpower was also identified as method or technique which subjects used to maintain abstinence (Ludwig, 1985). The theme of this research demonstrates that willpower was also important in the decision to quit. It is possible that there are different types or aspects of willpower with each part used in a different situation. More investigation needs to be done with this elusive concept.

The decision to quit smoking was such a unique phenomenon that informants struggled to provide descriptions of similar decisions, which has implications for treatment. Many of the informants attempted to compare the decision to losing weight. These people suggested that losing weight was quite similar, yet these same informants have not been successful at losing weight and keeping it off. There was not one informant that could explain this lack of success. More research should be done to concretely define the decision to quit smoking.

The results from the Relapse category supported most of the existing literature. It is clear, however, that the environment contributes to relapse events. So, while the environment does not seem to contribute to a decision to quit smoking, it does appear to have a role in the decision to start smoking again. Some informants used the environment as motivation to continue abstention. The role of the environment is still not entirely clear and much more needs to be done with this important factor.

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